



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0465; Project Identifier AD-2022-00330-R]

RIN 2120-AA64

Airworthiness Directives; Leonardo S.p.a. Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to supersede Airworthiness Directive (AD) 2021-20-10, which applies to certain Leonardo S.p.a. Model AB139 and AW139 helicopters. AD 2021-20-10 requires removing from service a certain part-numbered main gearbox (MGB) spherical bearing lock nut (lock nut) that is installed on certain part-numbered MGBs and replacing it with a newly designed MGB lock nut. AD 2021-20-10 also prohibits installing any MGB with the affected MGB lock nut and prohibits installing any affected MGB lock nut on any helicopter. Since the FAA issued AD 2021-20-10, it was discovered that a part number (P/N) was incorrectly listed and that the applicability needed to be clarified. This proposed AD would retain the requirements of AD 2021-20-10 and would clarify the applicability. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Leonardo S.p.A. Helicopters, Emanuele Bufano, Head of Airworthiness, Viale G. Agusta 520, 21017 C. Costa di Samarate (Va) Italy; telephone +39-0331-225074; fax +39-0331-229046; or at <https://customerportal.leonardocompany.com/en-US/>. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0465; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the European Union Aviation Safety Agency (EASA) AD, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Kristi Bradley, Program Manager, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email kristin.bradley@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2022-0465; Project Identifier AD-2022-00330-R” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Kristi Bradley, Program Manager, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email kristin.bradley@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA issued AD 2021-20-10, Amendment 39-21748 (86 FR 57574, October 18, 2021) (AD 2021-20-10), for Leonardo S.p.a. Model AB139 and AW139 helicopters, without MGB lock nut P/N 3G6320A09152 installed and with MGB P/N 3G6320A00131, 3G6320A00132, 3G6320A00133, 3G6320A00134, 3G6320A00135, 3G6320A00136, 3G6320A22031, 4G6320A00132, or 4G6320A00133 installed; or MGB P/N 3G320A00133 with serial number (S/N) M23, or MGB P/N 3G6320A00134, with S/N M6, N76, N92, P124, P129, P131, P162, P184, Q230, Q243, Q249, R272, V21, V39, V96, V163, V211, V241, V272, V281, V384, V386, or V622 installed; or MGB P/N 3G6320A00136 with S/N AW1, AW2, AW3, AW5, or AW10 installed.

AD 2021-20-10 requires, within 100 hours time in service (TIS), or during the next scheduled MGB overhaul, whichever occurs first after the effective date of the AD, removing a certain part-numbered MGB lock nut from service and replacing it with a different part-numbered MGB lock nut. AD 2021-20-10 also prohibits installing an MGB having an affected MGB lock nut on any helicopter and also prohibits installing an affected MGB lock nut on any helicopter as of the effective date of the AD.

AD 2021-20-10 was prompted by a series of EASA ADs beginning with EASA AD 2019-0036, dated February 15, 2019 (EASA AD 2019-0036), issued by EASA, which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition for all serial-numbered Leonardo S.p.a. Helicopters (formerly Finmeccanica S.p.A, AgustaWestland S.p.A., Agusta S.p.A.; and AgustaWestland Philadelphia Corporation, formerly Agusta Aerospace Corporation) Model AB139 and AW139 helicopters. EASA advised that an occurrence was reported of a cracked MGB lock nut P/N 3G6310A09151, which is used to keep the planetary gears in position. EASA AD 2019-0036 required replacing each MGB lock nut with an airworthy MGB lock nut. EASA advised this condition, if not detected and corrected, could lead to failure of the MGB planetary gears, resulting in loss of control of the helicopter.

After EASA issued EASA AD 2019-0036, an additional occurrence was reported of a cracked MGB lock nut P/N 3G6320A09151. Accordingly, EASA superseded EASA AD 2019-0036 with EASA AD 2019-0174, dated July 18, 2019 (EASA AD 2019-0174), which retained the requirements of EASA AD 2019-0036 but reduced the compliance times. After EASA issued EASA AD 2019-0174, Leonardo Helicopters issued Alert Service Bulletin No. 139-609, dated December 18, 2019, to provide instructions for replacing the affected MGB lock nut with MGB lock nut P/N 3G6320A09152, which has a redesigned flange reducing the stress at the bearing nut locations where cracks were detected.

Accordingly, EASA then issued EASA AD 2020-0011, dated January 29, 2020, and corrected January 30, 2020 (EASA AD 2020-0011), which superseded EASA AD 2019-0174, and partially retained the requirements of EASA AD 2019-0174. EASA AD 2020-0011 revised the compliance times in EASA AD 2019-0174, required replacing

each affected MGB lock nut with a newly designed MGB lock nut, and prohibited installing an affected MGB on any helicopter. After EASA issued EASA AD 2020-0011, EASA identified certain MGB part numbers that were inadvertently categorized incorrectly and therefore listed in the wrong group of helicopters. Accordingly, EASA issued EASA AD 2020-0011R1, dated November 20, 2020 (EASA AD 2020-011R1), thereby revising EASA AD 2020-0011. EASA AD 2020-0011R1 retained the requirements of EASA AD 2020-0011 and corrected Appendix 1 of EASA AD 2020-0011.

After EASA issued EASA AD 2020-0011R1, Leonardo Helicopters issued Alert Service Bulletin No. 139-609, Revision A, dated April 13, 2021, which identifies an additional part-numbered MGB, which is also affected by the unsafe condition. Accordingly, EASA superseded EASA AD 2020-0011R1 with EASA AD 2021-0121, dated May 4, 2021 (EASA AD 2021-0121). EASA AD 2021-0121 adds an additional part-numbered MGB with a certain S/N to the list of affected parts. EASA AD 2021-0121 retains the requirements of EASA AD 2020-0011R1, and corrects Table 1 and Appendix 1 of EASA AD 2020-0011R1.

Accordingly, EASA AD 2021-0121 requires replacing each affected MGB lock nut with a newly designed MGB lock nut, and prohibits installing an affected MGB on any helicopter.

Actions Since AD 2021-20-10 Was Issued

Since the FAA issued AD 2021-20-10, it was discovered that MGB P/N 3G6320A00133 is incorrectly listed as MGB P/N 3G320A00133 in both the preamble and applicability paragraph of the AD. Also, the FAA determined that all MGBs, regardless of S/N, are affected by the unsafe condition. Therefore, this proposed AD would remove any reference to S/Ns in the applicability. In addition, this proposed AD includes the total U.S. fleet costs, which were inadvertently excluded in AD 2021-20-10.

FAA's Determination

These helicopters have been approved by EASA and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the European Union, EASA has notified the FAA about the unsafe condition described in its AD. The FAA is

proposing this AD after evaluating all known relevant information and determining that the unsafe condition described previously is likely to exist or develop on other helicopters of the same type designs.

Related Service Information Under 1 CFR Part 51

This proposed AD would require Leonardo Helicopters Alert Service Bulletin No. 139-609, Revision A, dated April 13, 2021, which the Director of the Federal Register approved for incorporation by reference as of November 22, 2021 (86 FR 57574, October 18, 2021).

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Service Information

The FAA also reviewed Leonardo Helicopters Alert Service Bulletin No. 139-567, Revision B, dated October 18, 2019, which provides additional information for replacing the MGB lock nut.

Proposed AD Requirements in this NPRM

This proposed AD would retain all of the requirements of AD 2021-20-10.

Differences Between this Proposed AD and EASA AD 2021-0121

EASA AD 2021-0121 requires a compliance time based on number of landings, whereas this proposed AD would require a compliance time based on hours TIS. The service information referenced in EASA AD 2021-0121 requires submitting certain information and parts to Leonardo, whereas this proposed AD would not. EASA AD 2021-0121 applies to all serial-numbered Model AB139 and AW139 helicopters, whereas this proposed AD would apply to all Model AB139 and AW139 helicopters, regardless of S/N, with a certain part-numbered MGB lock nut and MGB installed.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 130 helicopters of U.S. Registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this proposed AD.

Replacing each affected MGB lock nut with a newly designed MGB lock nut would take about 190 work-hours (during next MGB overhaul) and parts would cost about \$7,600 for an estimated cost of \$23,750 per helicopter and \$3,087,500 for the U.S. fleet.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive 2021-20-10, Amendment 39-21748 (86 FR 57574, October 18, 2021); and

b. Adding the following new airworthiness directive:

Leonardo S.p.a.: Docket No. FAA-2022-0465; Project Identifier AD-2022-00330-R.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) action by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2021-20-10, Amendment 39-21748 (86 FR 57574, October 18, 2021) (AD 2021-20-10).

(c) Applicability

This AD applies to Leonardo S.p.a. Model AB139 and AW139 helicopters, certificated in any category, with a main rotor gearbox (MGB) part number (P/N) 3G6320A00131, 3G6320A00132, 3G6320A00133, 3G6320A00134, 3G6320A00135, 3G6320A00136, 3G6320A22031, 4G6320A00132, or 4G6320A00133, and MGB spherical bearing lock nut (lock nut) P/N 3G6320A09151 installed.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 6320, Main Rotor Gearbox.

(e) Unsafe Condition

This AD was prompted by a cracked MGB lock nut. The FAA is issuing this AD to replace an affected MGB lock nut with a new MGB lock nut. The unsafe condition, if

not addressed, could result in failure of the MGB planetary gears, resulting in loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) Within 100 hours time-in-service, or during the next scheduled MGB overhaul, whichever occurs first after November 22, 2021 (the effective date of AD 2021-20-10), remove each MGB lock nut P/N 3G6320A09151 from service and replace with MGB lock nut P/N 3G6320A09152 in accordance with Annex A, steps 1 through 17, of Leonardo Helicopters Alert Service Bulletin No. 139-609, Revision A, dated April 13, 2021, except you are not required to send parts to Leonardo Helicopters.

Note to paragraph (g)(1): Leonardo Helicopters service information refers to an MGB lock nut as a ring nut.

(2) As of November 22, 2021 (the effective date of AD 2021-20-10), do not install any MGB having MGB lock nut P/N 3G630A09151 on any helicopter, and do not install any MGB lock nut P/N 3G630A09151 on any helicopter.

(h) Special Flight Permits

Special flight permits are prohibited.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (j)(1) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Kristi Bradley, Program Manager, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email kristin.bradley@faa.gov.

(2) For service information identified in this AD, contact Leonardo S.p.A. Helicopters, Emanuele Bufano, Head of Airworthiness, Viale G. Agusta 520, 21017 C. Costa di Samarate (Va) Italy; telephone +39-0331-225074; fax +39-0331-229046; or at <https://customerportal.leonardocompany.com/en-US/>. You may view this referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(3) The subject of this AD is addressed in European Union Aviation Safety Agency (EASA) AD 2021-0121, dated May 4, 2021. You may view the EASA AD at <https://www.regulations.gov> in Docket No. FAA-2022-0465.

Issued on April 13, 2022.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2022-08304 Filed: 4/19/2022 8:45 am; Publication Date: 4/20/2022]